

NEW SPECIES OF *DAMALIS* FABRICIUS AND *OMMATIUS* WIEDEMANN
(DIPTERA: ASILIDAE) FROM INDIA

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Abstract.—Two new species of asilids, *Damalis anamaliensis* (Trigonimiminae) from Kerala State and *Ommatius disparis* (Ommatiinae) from Maharashtra State, India, are described, illustrated, and compared with congeners. This is the first report of a species of *Ommatius* from this region of India.

Key Words: Asilidae, Trigonimiminae, Ommatiinae, *Damalis*, *Ommatius*, new species, India

Damalis Fabricius, 1805 and *Ommatius* Wiedemann, 1821 are widely distributed asilid genera in the Oriental Region (Oldroyd 1975). Presently, India has the larger number of species of these genera with 23 and 52, respectively (Joseph and Parui 1984a, b, 1987a, b, 1990a, b, 1995, 1998, 1999). Recently, two undescribed species from southern and south-central India were found in the Institut Royal des Sciences Naturelles de Belgique (IRSNB) and in the University Museum of Natural History, Oxford (UMO). The species are described, the terminalia illustrated, and compared with congeners, increasing the number of species of *Damalis* to 24 and *Ommatius* to 53.

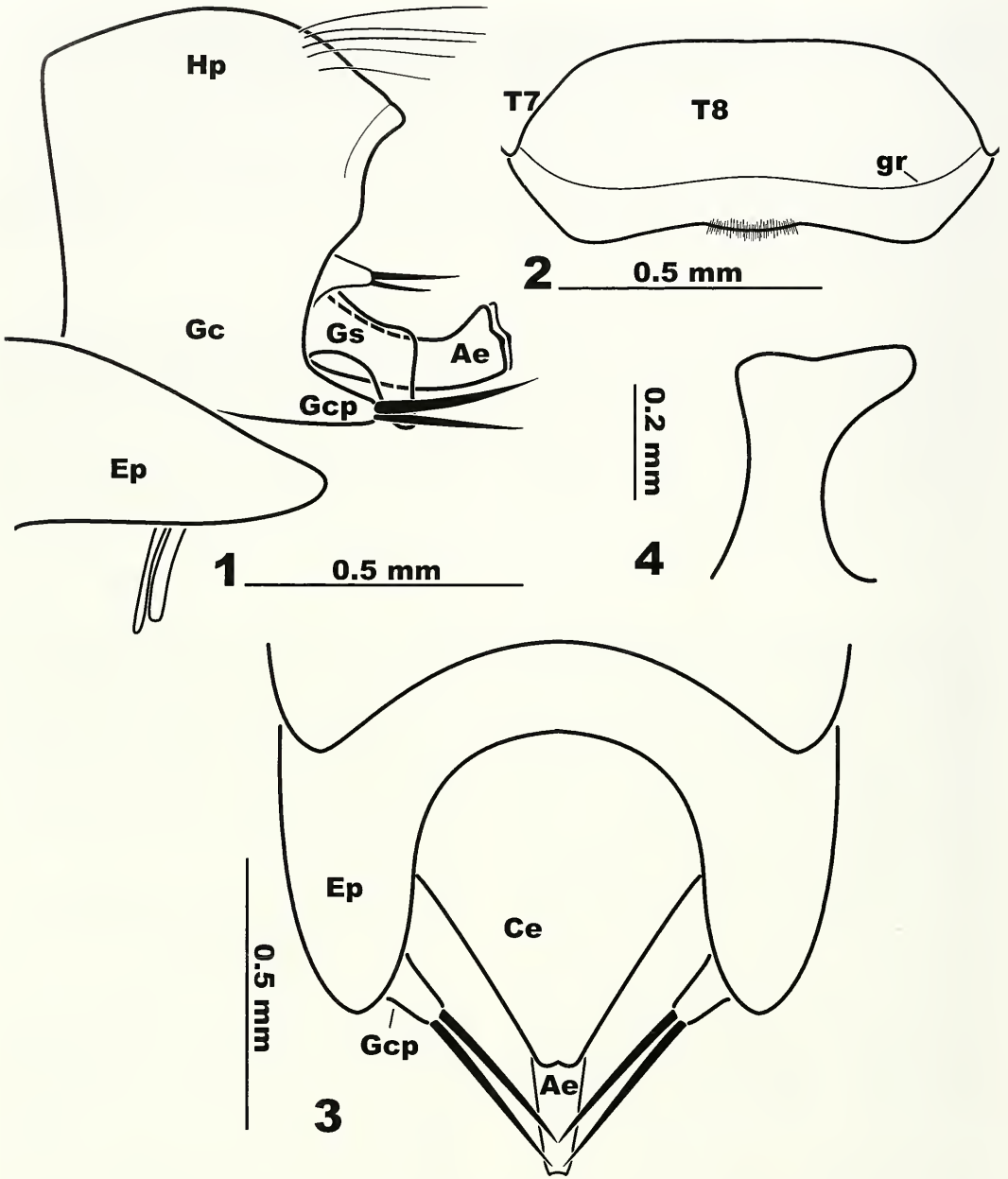
Morphological terminology follows McAlpine (1981). Measurements were made using an ocular micrometer in a Meiji dissecting microscope. Terminalia were prepared for study, illustrated, and permanently stored following Scarbrough (2005) and Scarbrough and Costantino (2005). *Damalis* terminalia are illustrated in their normal rotated (180°) position with the hypandrium and epandria in dorsal and ventral positions,

respectively. That of *Ommatius* is illustrated in the normal dorsal-ventral position. A single measurement bar is used for terminalia illustrated in different positions. Data are recorded as they appear on labels with each line denoted by a slash [/]. Dates are recorded as Roman numerals.

Damalis anamaliensis Scarbrough,
new species
(Figs. 1–4)

Male.—Body black. Measurements, body 8.0–13.0 mm, wings 7.9–11.5 mm. *Head:* Face and frons brown tomentose, dense except dorsal 1/2 of face sparse, subshiny; face, frons, antenna, ocellar tubercle, palpus, and proboscis black setose, that of face especially abundant; bristles absent. Occiput dusty gray tomentose, slightly brownish or yellowish along margin of eye; white setose except black across vertex, continuing to midlateral margin of eye. Palpus brown apically, brownish yellow basally, yellowish setose.

Thorax: Black, mostly dusty gray tomentose, brownish yellow above postalar callus; obvious longitudinal stripes



Figs. 1-4. Male terminalia of *Damalis ananaliensis*. 1-3, Lateral, dorsal, and ventral views. 4, Gonostylus, lateral view. Abbreviations, Ae=aedeagus, Ce=cercus, Ep=epandrium, Gc=gonocoxite, Gcp=gonocoxal process, gr=groove, Gs=Gonostylus, Hp=hypandrium, T7=tergite 7, T8=tergite 8.

absent dorsally; black setose, especially long and abundant medially and posteriorly, bristles absent. Scutellum yellowish gray or gray tomentose, with short black setae; marginal setae contrastingly long,

black; preapical groove present. Pleuron yellowish gray to yellowish tomentose, setae mostly black, katatergite with sparse whitish setae dorsally. Halter dull brownish yellow or yellow.

Wing: Mostly blackish microtrichose, bm cells posteriorly mostly bare; slightly brownish anteriorly, subcostal and costal cells darkest. Crossvein r-m at apical 1/3 of cell d, slightly longer than width of cell m_1 basally. Cell m_1 narrow basally, sides divergent on basal 1/3, constricted preapically; base about 1/3 as wide as cell at its widest point. Five posterior cells present.

Legs: Black setose, stout bristles absent. Coxae, trochanters, and femora black except basal 1/4–1/3 of hind femur yellow or yellowish brown; middle and hind coxae yellow setose laterally; hind trochanter without spiny bristles apically. Hind femur moderately swollen medially, 2.2 times wider than base; apical 1/3 with only 3 bristles in each ventral row. Tibiae yellow, narrow apices blackish; front and middle tibiae blackish anteriorly. Tarsi with all tarsomeres yellow, at least basally, apices black, black becoming more widespread on apical 2–3 tarsomeres; pulvillus yellow, claws yellow basally, black apically.

Abdomen: Black, shiny dorsally, slender with basal 5 segments of equal widths, lateral margins of tergites partly or entirely yellowish-gray tomentose; sternites yellowish-gray tomentose, sternite 1 entirely and 2–6 with large atomentose spots laterally. Setae mostly whitish, usually long, scattered on sternites, abundant on all tergites laterally; tergites 1–2 whitish setose dorsally; tergites 3–8 dorsally with black, short setae.

Terminalia (Figs. 1–4): Reddish or yellowish brown with mostly blackish vestiture. Cercus elongate, triangular, apex pointed, yellow setose. Epandrium short, wide, triangular; epandrial notch wide, U-shaped in dorsal view. Gonostylus flat, footlike, apex asymmetrically capitate. Gonocoxal process short, not projecting beyond epandrium. Aedeagus tubular apically, flattened and wider than preapically, slightly triangular in

lateral view. Apical margin of hypandrium simple, not produced medially.

Female.—Unknown.

Types.—Holotype ♂, INDIA: S. India [Kerala State], Anamalai Hills / Cinchona 3500f / ix.1969 (IRSNB). Paratype ♂, same data as holotype (IRSNB).

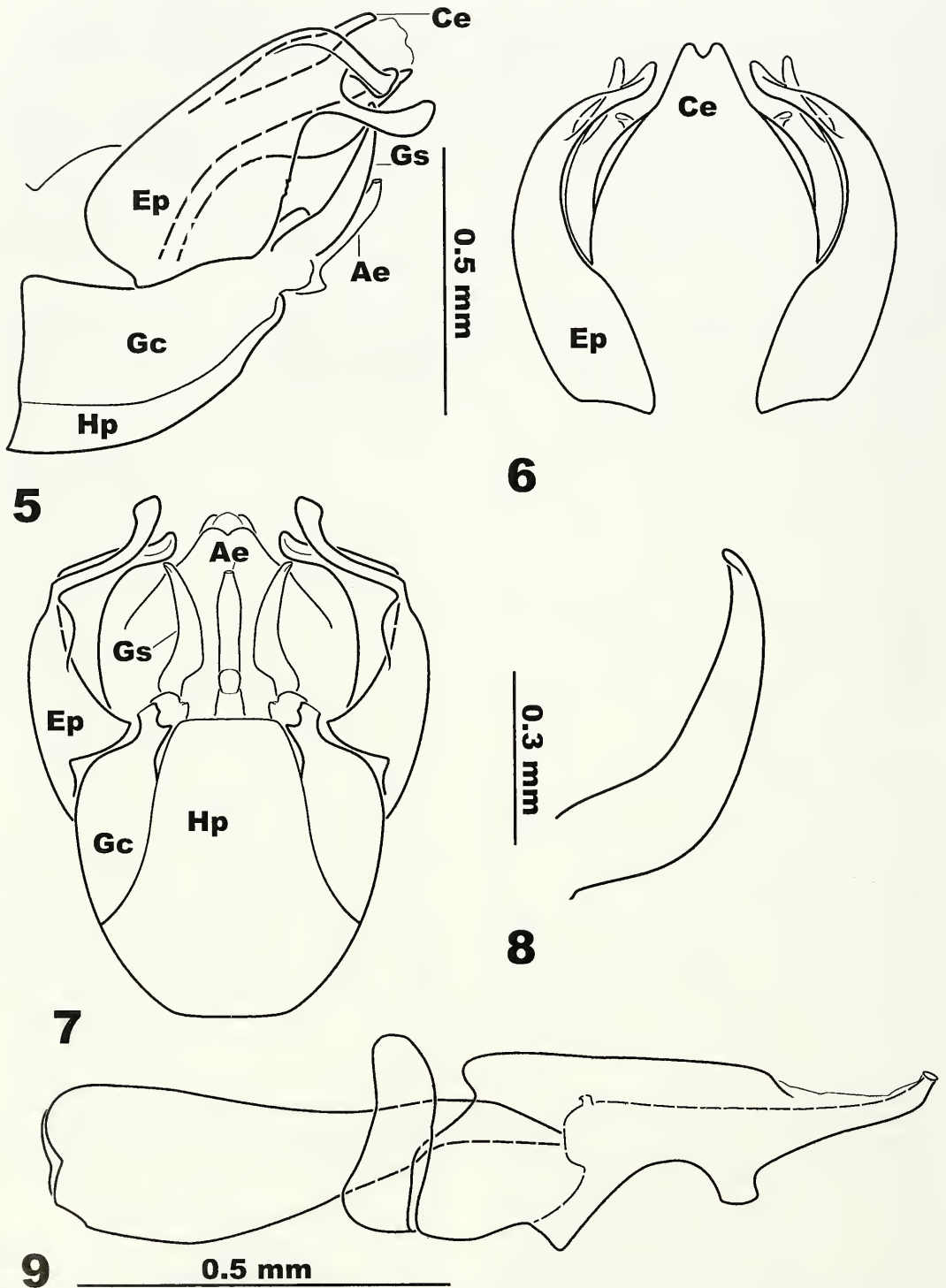
Etymology.—The name *anamaliensis* refers to the type locality (Anamalai Hills).

Remarks.—*Damalis anamaliensis* is distinguished from congeners by the abundant facial setae, absence of facial bristles, dusty grayish tomentum of the thoracic dorsum, blackish legs, yellowish tarsomeres, and combined characters of the terminalia (Figs. 1–4). *Damalis anamaliensis* will run to couplet 11 in Joseph and Parui's (1984b) key but is distinguished from *D. artigasi* Joseph and Parui and *D. rufoabdominalis* Joseph and Parui by the absence of a medially produced projection along the apical margin of the hypandrium. It is further distinguished from *D. artigasi* by the largely black hind femur whereas it is yellow with a black median band ('ring') in the latter species. It is also distinguished from *D. rufoabdominalis* in the black abdomen whereas it is brownish yellow in the latter species. *Damalis anamaliensis* is distinguished from *D. pseudoartigasi* Joseph and Parui (1987b) by the abundant black setae of the face, black femora, and characters of the terminalia (Figs. 1–4), especially the footlike gonostylus, and the shape of the aedeagus, and absence of a prominently produced apical margin of the hypandrium and a median process along the apical margin of the gonocoxa.

***Ommatius disparis* Scarbrough,
new species**

(Figs. 5–9)

Male.—Body 10.8 mm; wing 9.3 mm. *Head:* Yellowish tomentose, yellow setose. Face narrow, 1/10 as wide as head



Figs. 5-9. Male terminalia of *Ommatius disparis* Scarbrough. 5-7, Lateral, dorsal, and ventral views. 8, Gonostylus, lateral view. 9, Aedeagus, lateral view. Abbreviations, Ae=aedeagus, Ce=cercus, Ep=epandrium, Gc=gonocoxite, Gs=Gonostylus, Hp=hypandrium.

at antennae; setae sparse dorsally, 5–6 thin brown bristles and long setae on lower 1/3. Palpus, proboscis, frons, and ocellar tubercle yellow setose. Antenna brown setose, 1 seta below scape long, extending to apex of flagellum; scape and pedicel yellowish brown; flagellum black, about 1/3 longer than wide basally, longer than combined length of scape and pedicel; style sparsely setose, 1–2 at apex, 3 on apical 1/2 ventrally. Frons narrow, sides converge slightly dorsally. Occiput yellowish to white tomentose, whitish setose; postocular bristles yellow, proclinate, those dorsally with tips just beyond posterior margin of eye.

Thorax: Black, postalar callus reddish. Pronotum white setose, 4 yellowish bristles dorsally. Scutum with sparse, yellow setae; dorsocentral bristles thin, setalike, 2 posterior bristles black; notopleural bristles yellow, supra-alar and postalar bristles black. Scutellum with sparse yellow setae and shallow preapical groove, stout marginal bristles absent. Pleuron yellowish-gray tomentose, sparsely white setose; anepimeral and katartergal bristles white. Halter yellow.

Wing: Costal margin straight, not dilated anteriorly; apical 1/3 densely microtrichose. Base of cell r_4 just beyond apex of cell d ; R_5 slightly concave. Crossvein $r-m$ well beyond middle of cell d , about 1/2 as long as CuA_1+M_3 . Cell m_1 narrow basally, 1/3 as wide as cell at basal 1/3, constricted preapically.

Legs: Coxae and trochanters black, yellowish-gray tomentose, vestiture yellowish. Front and middle femora yellow with slight tint of brown dorsally, yellow setose ventrally, setae below middle femur moderately thick. Hind femur normal, about 6 times longer than wide; apical 1/3–1/2 and venter except narrow base and apex brown, remaining yellow; anteroventral bristles absent; 7–8 yellow posteroventral bristles present. Tibiae yellow, apical 1/4–1/3 of hind tibia brown; bristles mostly brown, lateral

bristles of front tibia yellow. Tarsi mostly reddish brown with apical tarsomeres darkest; basal tarsomere yellow, narrow apex reddish brown; hind basitarsomere yellowish brown basally; bristles brown.

Abdomen: Largely yellowish brown, segment 1 entirely, segment 2 and tergite 3 largely black, wide apical margins of tergites 1–2 yellowish brown. Setae mostly yellow, tergite 4 and sternite 5 sparsely brown setose, tergites 5–8 and sternites 6–8 entirely black setose.

Terminalia (Figs. 5–9): Yellowish brown, mostly yellow setose. Epandrium angular ventrobasally, bent downward apically, with deep, narrow, notch. Gonostylus sickleshaped, tapered apically. Aedeagus linear, distiphallus slightly curved upward apically. Hypandrium wide, truncate apically.

Female.—Unknown.

Holotype.—♂, INDIA: Poona [modern-day Pune, Maharashtra State, south-central India] / Ghauts of. [Western Ghaut Mountains] / Coll. abt. 1888 / by T. B. Fry, Pres. 1905 by / J. W. Yerbury / 1905 /1365 (UMO).

Etymology.—Latin *disparis* meaning ‘different or unequal’ referring to the different lengths of the epandrial lobes.

Remarks.—*Ommatius disparis* is the first species of *Ommatius* recorded from the Indian State of Maharashtra. It distinguished from congeners by the yellow setae and bristles of the body, style with sparse setae, bare basally, flagellum as long as scape and pedicel combined, hind femur brown except basal 1/2 dorsally and narrow apex and narrow base ventrally yellow, basal 3 segments of abdomen mostly black, remaining yellow brown, and combined characters of the terminalia (Figs. 5–9).

Ommatius disparis runs to couplet 46 in the Joseph and Parui (1998) key. The modified key below separates the three species.

46. Antenna black; femora black except yellowish apex of front femur (Andhra Pradesh)
 *pseudojabalpurensis* Joseph and Parui
 - Pedicel and scape brownish yellow or yellowish, flagellum brown; femora partly yellow 46a
- 46a. Front and middle femora yellowish brown, apices black; hind femur mostly black, basal 1/3 yellowish brown; hind basitarsomere and terminalia black; epandrium with dorsal lobe flat, blade-like, 4–5 times as long as ventral lobe, ventral lobe spinelike (Andaman Island)
 *rajani* Joseph and Parui
 - Front and middle femora yellow, pale brownish yellow dorsally; hind femur yellowish on basal 1/2–2/3; hind basitarsomere and terminalia yellowish brown; lobes of epandrium long and slender, ventral lobe slightly longer than dorsal lobe (Figs. 5–7) (Western Ghaut Mountains, Maharashtra State) . . . *disparis*, n. sp.

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